

CLAIMS

What is claimed as being new and desired to be protected by LETTERS PATENT of the United States is as follows:

1. A fence router table system for supporting and routing linear fence components in a safe, accurate and efficient manner comprising, in combination:

a table with a planar working surface in a horizontal plane and with depending legs to maintain the table and working surface at a desired height, the working surface having a near side and a parallel far side and parallel lateral sides there between, the sides being in a rectangular configuration with a parallel rail located above each lateral side and with two fixed blocks on each lateral side adjacent to the near and far sides and with inverted L-shaped spacer coupling each lateral side with the associated fixed blocks and with a pair of adjustable supports on each rail adjacent to the near and far side, the working surface having a center line parallel with, and midway between, the lateral sides to divide the working surface into a first half and a second half, the spacer adjacent to the second half having threaded holes there through;

a slide assembly including a tube with ends positioned above the rails and a pair of brackets coupling the ends of the tube with the rails, each bracket having a circular upper hole rotatably receiving the ends of the tube and a cylindrical lower

tunnel slidably receiving the rails for supporting and moving the tube in a path of movement always parallel with the near and far sides;

a template removably positioned on the first half of the working surface, the template having primary recesses corresponding to the profile and depth of secondary recesses to be formed in linear fence components;

a plurality of linear fence components removably positioned in parallel relationship on the second half of the working surface with a first edge in contact with the template and with a second edge, and a threaded bolt extending through each threaded hole to securely retain the components in parallel relationship with each other and in contact with the template;

a pantograph with a primary arm having a free exterior end extending toward the far side and having an interior end with a pin pivotably coupled to the tube midway between the center line and the rail without the threaded holes, the pantograph having a secondary arm and having a free exterior end extending toward the far side and having an interior end with a pin pivotably coupled to the tube midway between the center line and the rail with the threaded holes, each arm including a pair of vertical plates and adjacent upper and lower plates and a strengthening cylinder within the tube, the pantograph also having a cross arm with ends pivotally coupled to the primary and secondary arms adjacent to

their free ends whereby movement of the primary arm will cause corresponding movement of the secondary arm with the primary and secondary arms always parallel to each other;

a power driven router secured to, and depending from, the free end of the secondary arm, the router being located over the linear fence components for forming recesses in the linear fence components; and

control mechanisms including a scribe secured to, and depending from, the free end of the primary arm, the scribe being located over the template with a knob adapted to be held by a user in moving the scribe to outline the profile of the primary recesses, the control mechanisms also including a handle with an exterior end formed with a grip and an interior end threadedly coupled to the midpoint of the tube for guiding the router in forming the depths of the primary and secondary recesses, the grip also adapted to function as a variable counter weight by being rotated to increase and decrease the moment of inertia of the pantograph around the tube.

2. A router system comprising:

a table with a working surface and with a parallel rail on each side;

a slide assembly including a tube and a pair of brackets, each bracket having a hole rotatably receiving the ends of the tube and a cylindrical tunnel slidably receiving the rails;

a pantograph with primary and secondary arms, each arm having a free exterior end and an interior end pivotably coupled to the tube;

a router secured to, and depending from, the free end of the secondary arm; and

control mechanisms including a scribe secured to, and depending from, the free end of the primary arm whereby movement of the primary arm and scribe with respect to a template will cause corresponding movement of the secondary arm and router with respect to work pieces to be routed.

3. The system as set forth in claim 2 wherein the working surface in a horizontal plane and with depending legs to maintain the table and working surface at a desired height, the working surface having a near side and a parallel far side and parallel lateral sides there between, the sides being in a rectangular configuration with a parallel rail located above each lateral side and with two fixed blocks on each lateral side adjacent to the near and far sides and with inverted L-shaped spacer coupling each lateral side with the associated fixed blocks and with a pair of adjustable supports on each rail adjacent to the near and far side, the working surface having a center line parallel with, and midway between, the lateral sides to divide the working surface into a first half and a second half, the spacer adjacent to the second half having threaded holes there through.

4. The system as set forth in claim 3 and further including a template removably positioned on the first half of the working surface, the template having primary recesses corresponding to the profile and depth of secondary recesses to be formed in linear fence components and a plurality of linear fence components removably positioned in parallel relationship on the second half of the working surface with a first edge in contact with the template and with a second edge, and a threaded bolt extending through each threaded hole to securely retain the components in parallel relationship with each other and in contact with the template.

5. The system as set forth in claim 4 wherein the primary arm has a free exterior end extending toward the far side and an interior end with a pin pivotably coupled to the tube midway between the center line and the rail without the threaded holes, and the secondary arm has a free exterior end extending toward the far side and an interior end with a pin pivotably coupled to the tube midway between the center line and the rail with the threaded holes, each arm including a pair of vertical plates and adjacent upper and lower plates and a strengthening cylinder within the tube, the pantograph also having a cross arm with ends pivotally coupled to the primary and secondary arms adjacent to their free ends whereby movement of the primary arm will cause

corresponding movement of the secondary arm with the primary and secondary arms always parallel to each other.